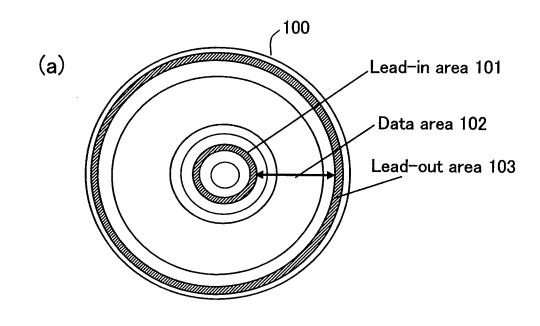
FIG.1



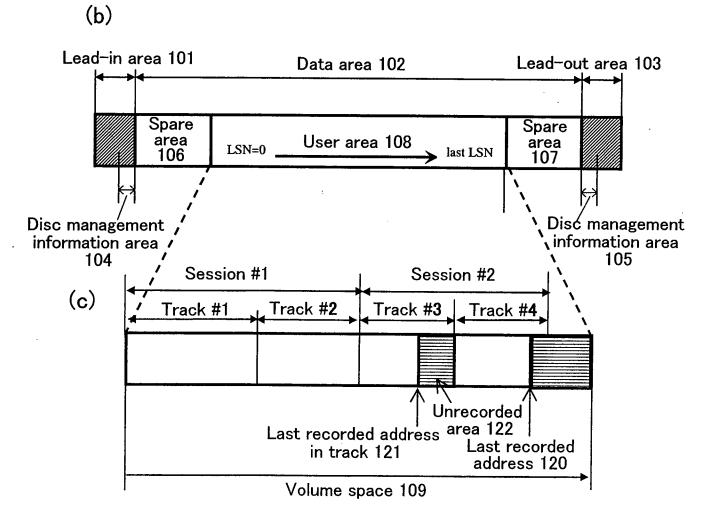
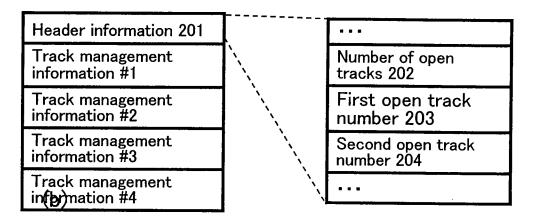


FIG.2

(a) Session management information 200



(b) Track management information 210

Session start information 211

Track start location information 212

Last recorded address information 213

(c) Space bitmap management information 220

Header information 221

Managed area information 222

Space bitmap information 223

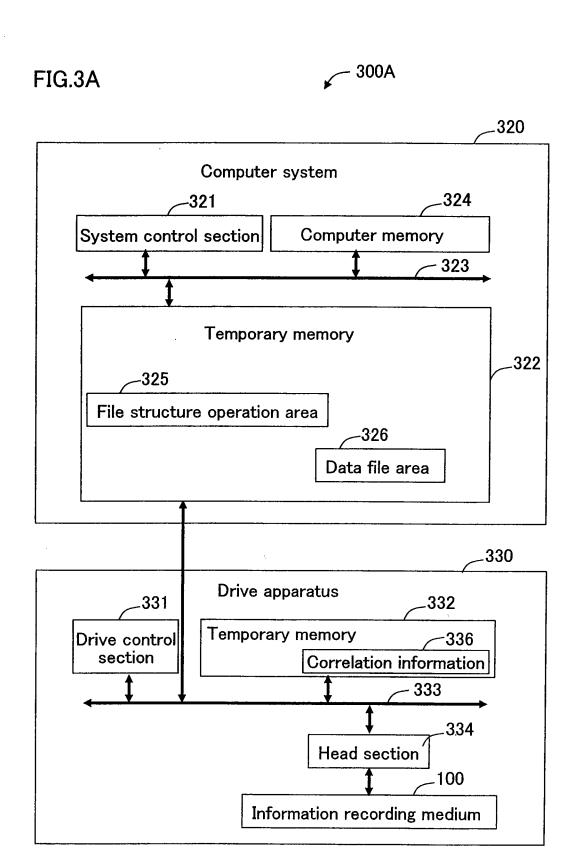


FIG.3B

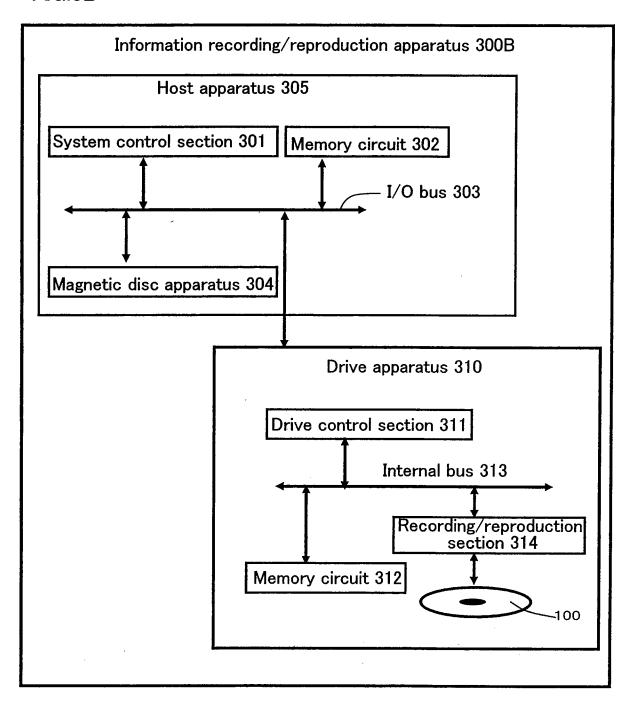
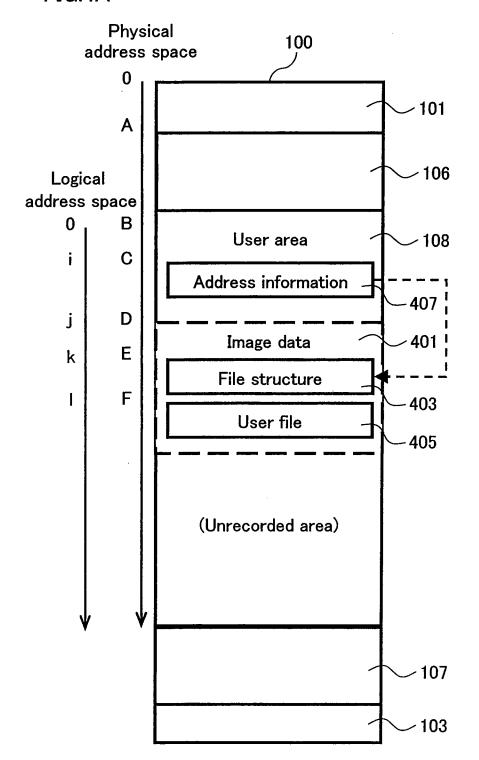
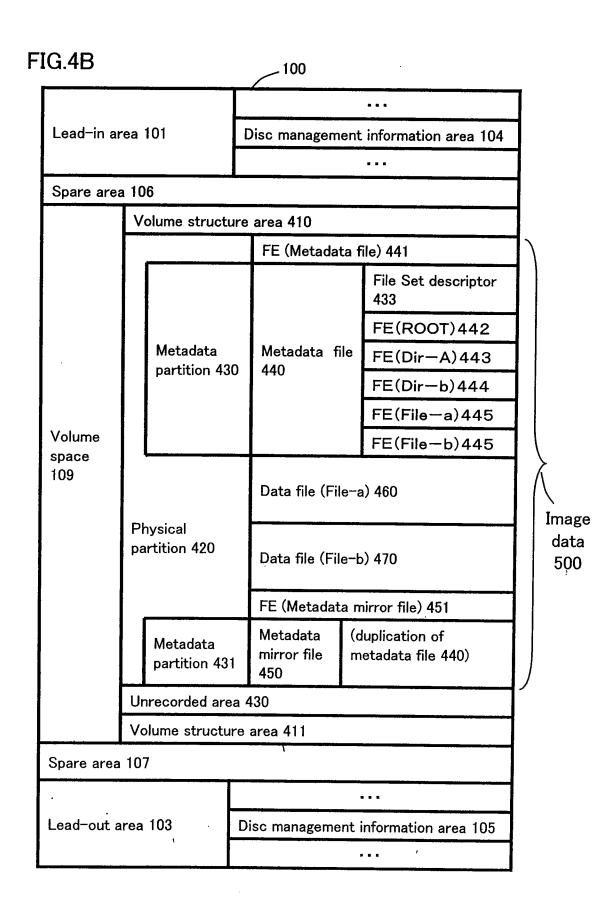
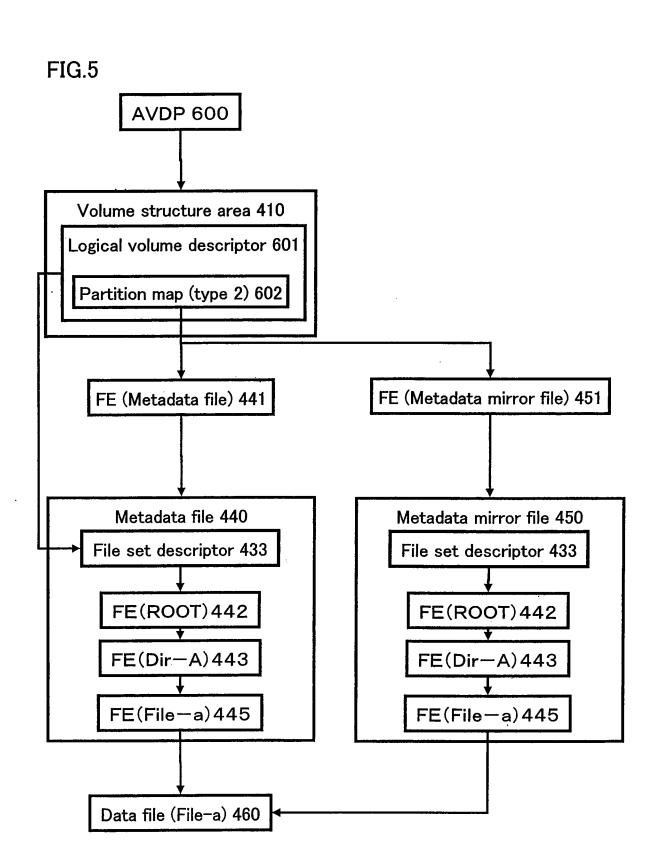


FIG.4A







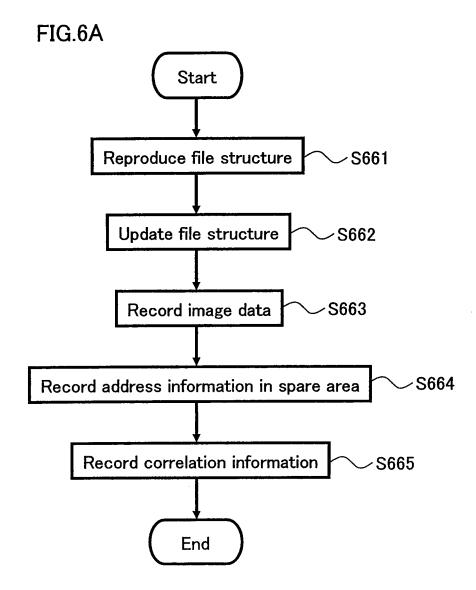


FIG.6B

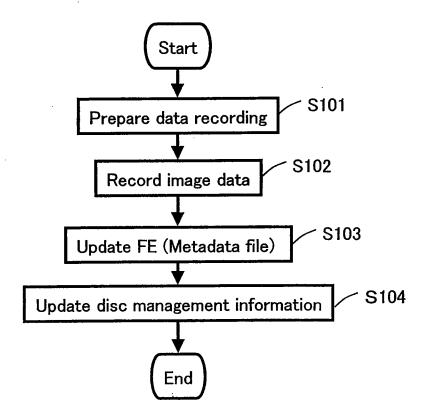
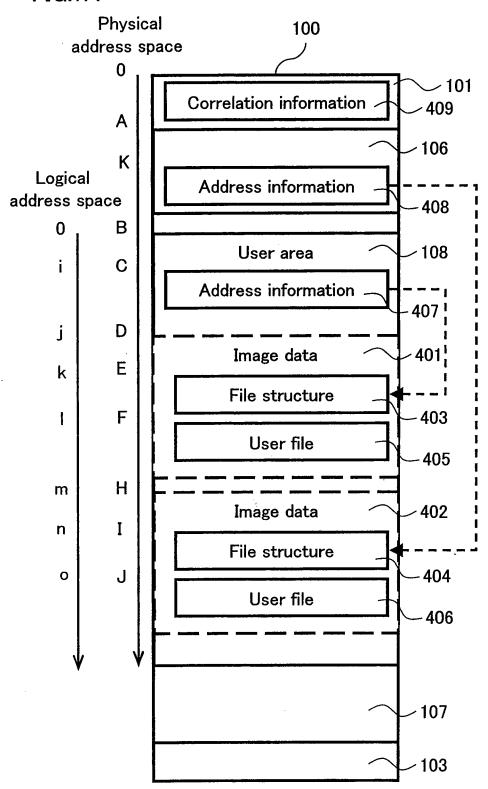


FIG.7A



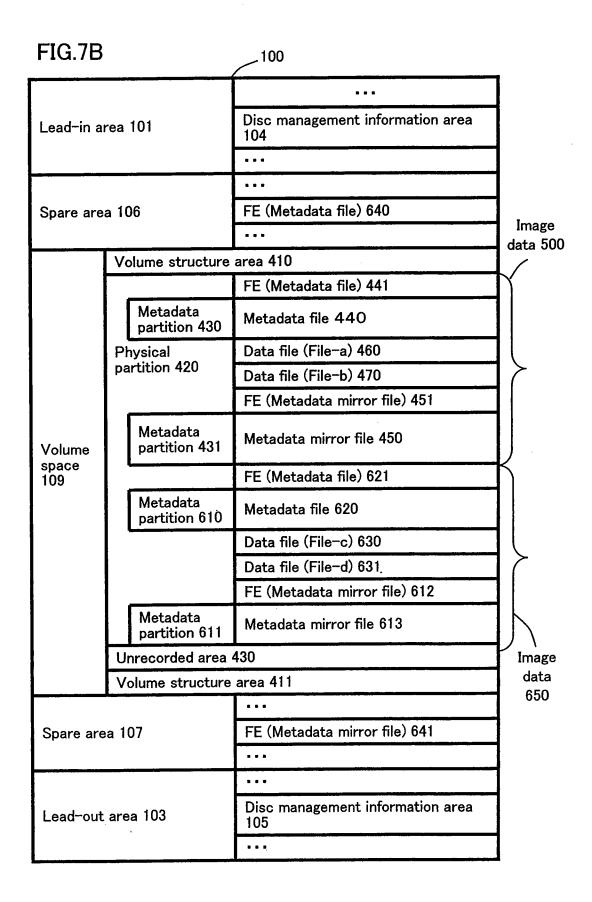


FIG.8A

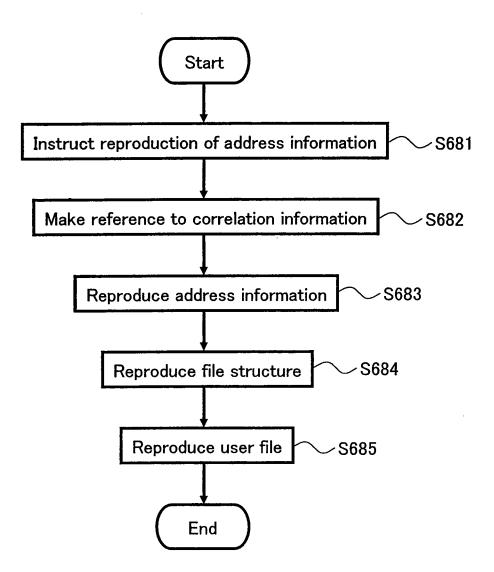
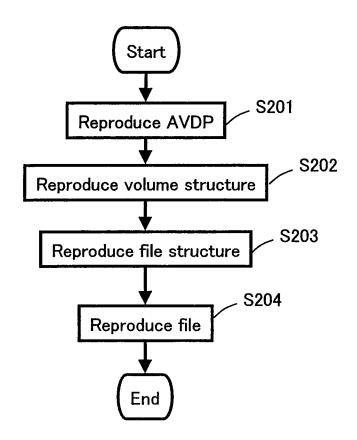
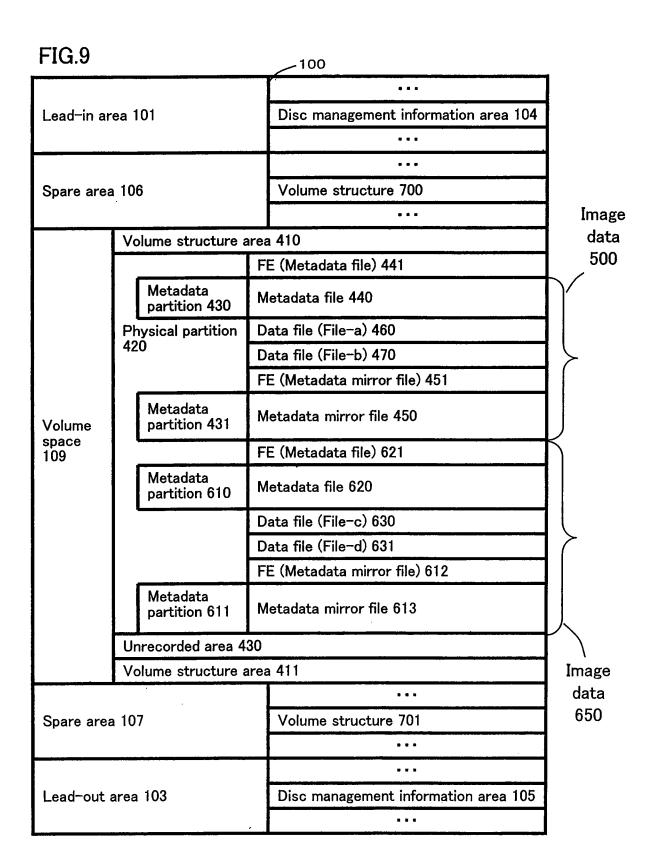
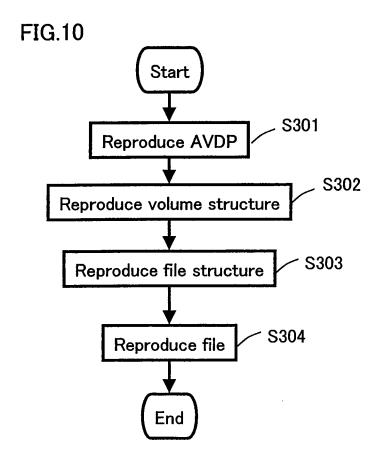


FIG.8B







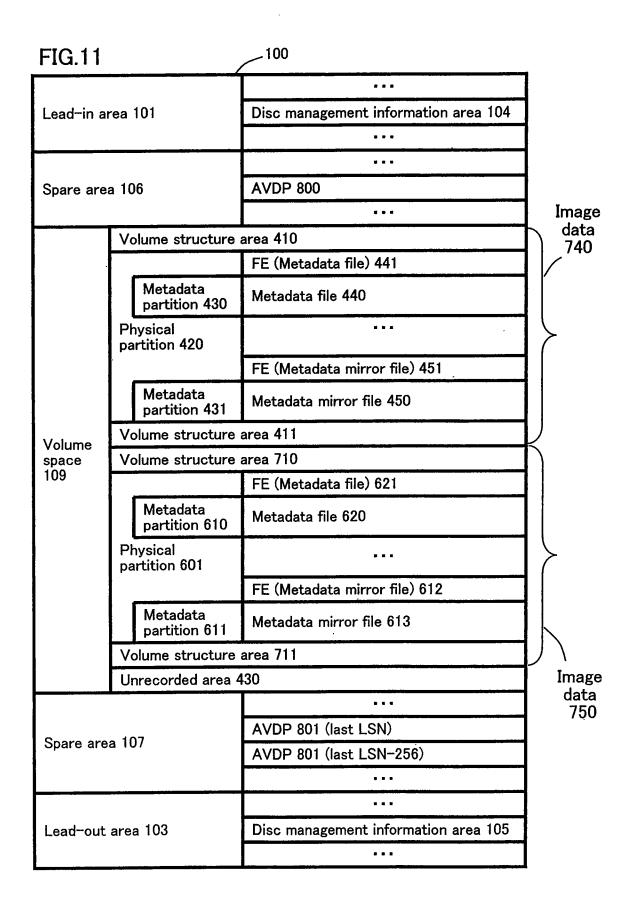


FIG.12

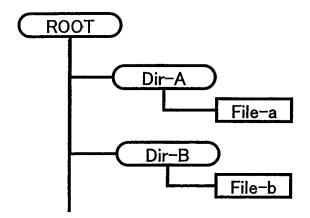
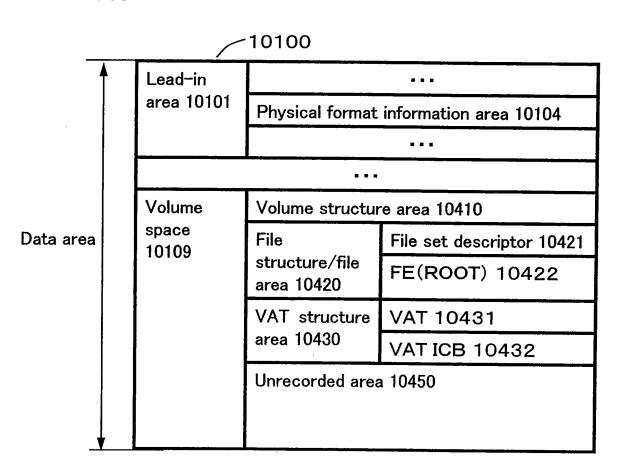
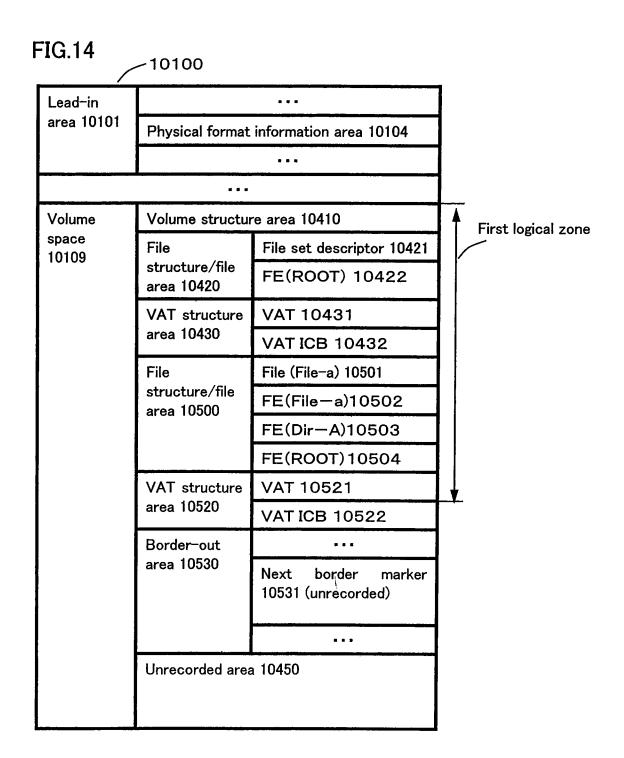


FIG.13





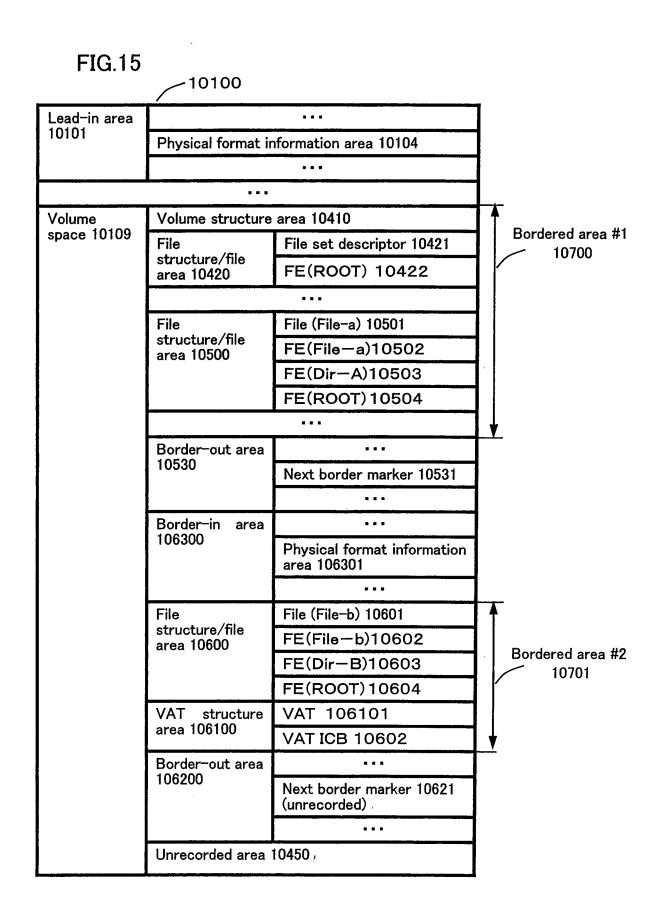


FIG.16

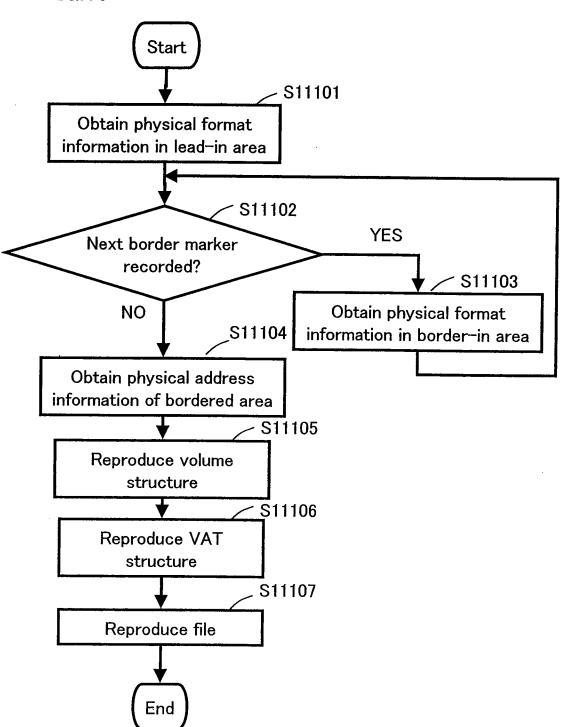


FIG.17

(a) Replacement management information list 1000

Header information 1001
Replacement management information #1
Replacement management information #2
Replacement management information #3
...
Terminator information
00h

(b) Replacement management information 1010

Status information 1011

Original location information 1012

Replacement location information 1013

FIG.18

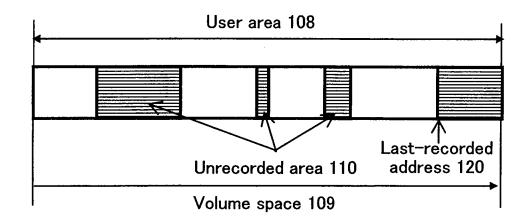


FIG.19

Disc structure information 1100

General information 1101
Replacement management information list location information 1102
User area start location information 1103
User area end location information 1104
Spare area information 1105
Recording mode information 1106
Last recorded address information 1107
Spare area management information 1108
Session management information location information 1109
Space bitmap management information location information 1110

FIG.20 100b

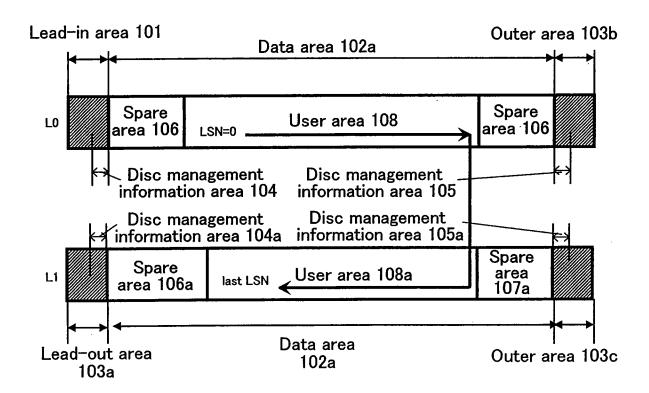


FIG.21

(a) The structure of image data 500

FE (Metadat	a file) 441]		
	File set descriptor 433			
	FE(ROOT)442]		
Metadata file 440	FE(Dir-A)443			
	FE(Dir-b)444			
	FE(File-a)445]		
	FE(File-b)445]		
Data file (Fil	e-a) 460			
Data file (Fil	e−b) 470]		
FE (Metadat	a mirror file) 451]		
Metadata	File set descriptor 433])		
mirror file 450	FE(ROOT)442			
	FE(Dir-A)443	→ Duplication		
	FE(Dir-b)444	Bupiloación		
	FE(File-a)445]		
	FE(File-b)445	1)		

Duplication of metadata file 412

(b) An example of different data arrangement in metadata file 440

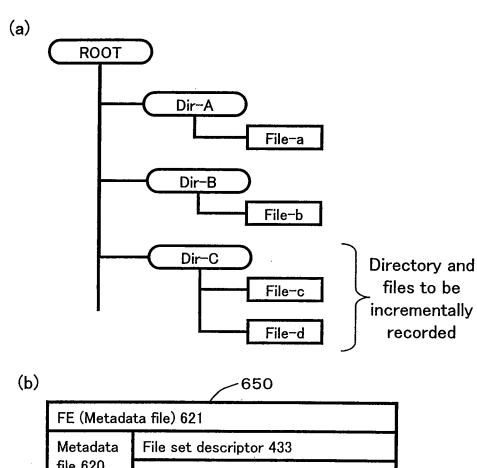
Metadata file 440	File set descriptor 433	
	FE(ROOT)442	
	FE(Dir-A)443	
	FE(File-a)445	
	FE(Dir-b)444	
	FE(File-b)445	

FIG.22

		·····		
	NSR area			
	•••			
	Primary volume descriptor			
	Implementation use volume descriptor			
	Partition descriptor	•••		
		Partition start location		
		•••		
	Logical volume descriptor 601	•••		
		Partition map (type 1) 1200		
Volume		Partitio n map (type 2) 602		
structure area 410			Metadata file location 1201	
			Metadata mirror file location 1202	
			Flag 1203	
			•••	
		•••		
	Logical volume integrity descriptor			
	•••			
	First anchor volume descriptor pointer 600			

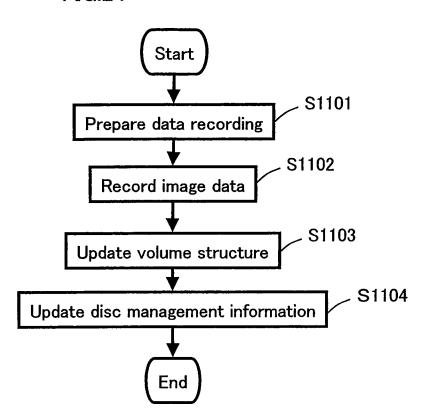
(b)	Volume structure area 411	Third anchor volume descriptor pointer
		Time another volume descriptor pointer
		Primary volume descriptor
		Implementation use volume descriptor
		Partition descriptor
		Logical volume descriptor 601
		Second anchor volume descriptor pointer

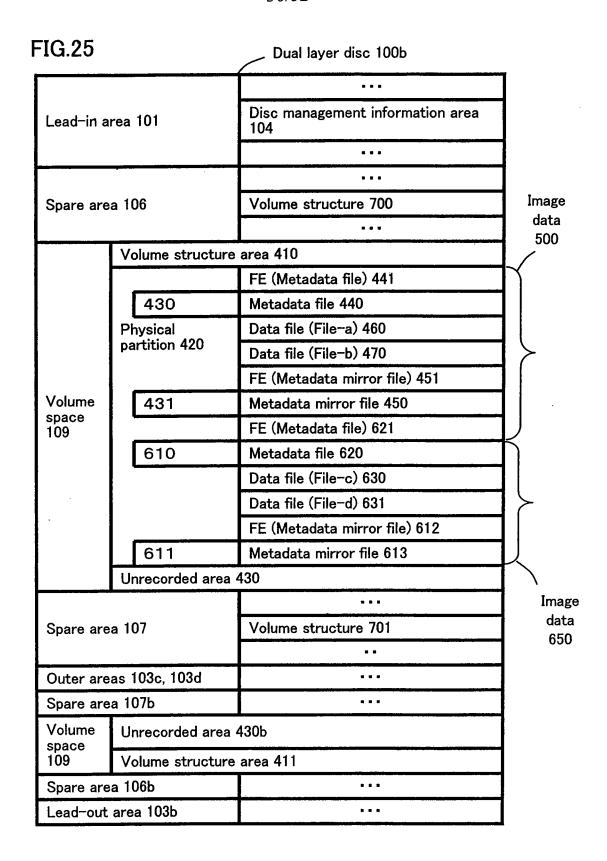
FIG.23

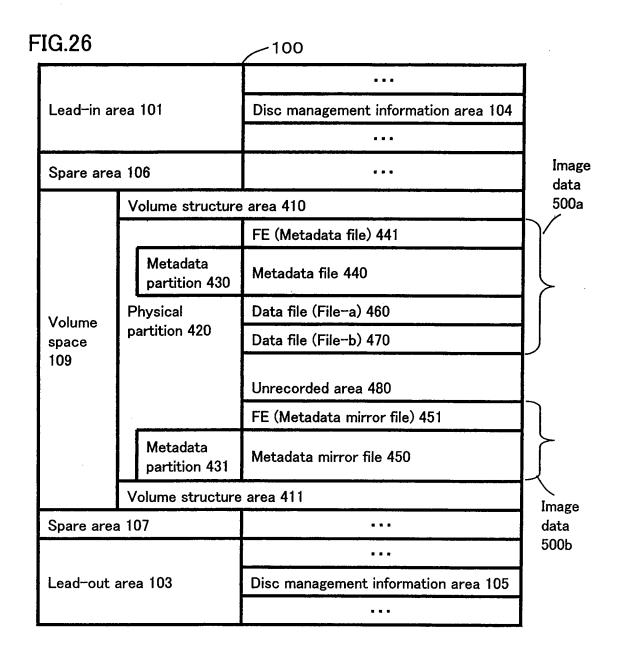


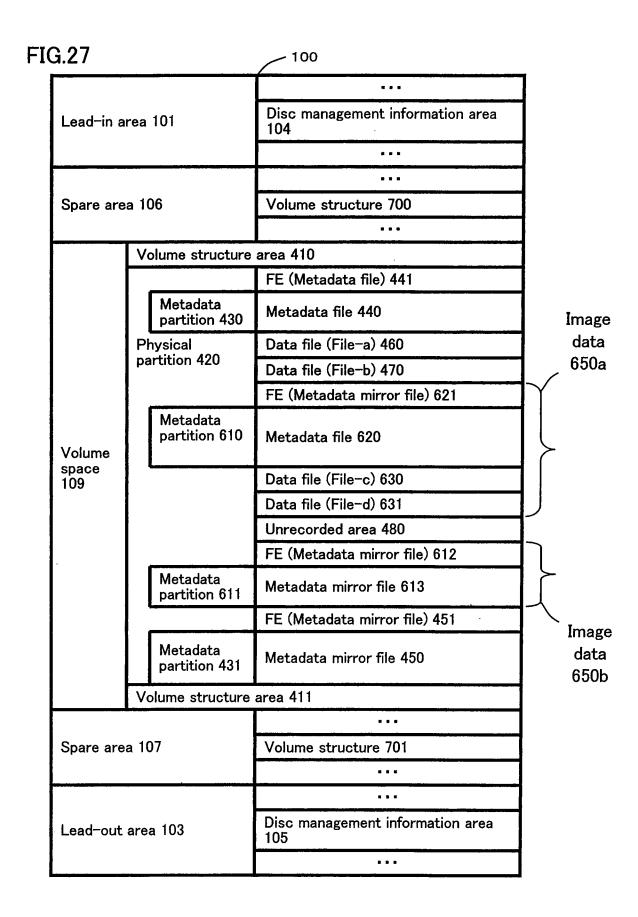
FE (Metadata file) 621			
Metadata file 620	File set descriptor 433		
	FE(ROOT)442		
	FE(Dir-A)443		
	FE(Dir-b)444		
	FE(DirC)622		
	FE(File-a)445		
	FE(File-b)445		
	FE(File-c)623		
	FE(File-d)624		
Data file (file-c) 630			
Data file (file-d) 631			
FE (Metadata mirror file) 612			
Metadata mirror file 613	(Duplication of Metadata file 620)		

FIG.24









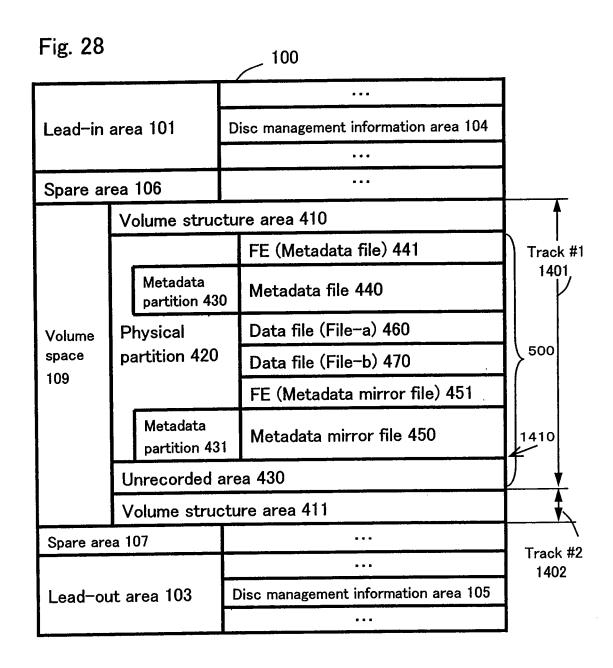
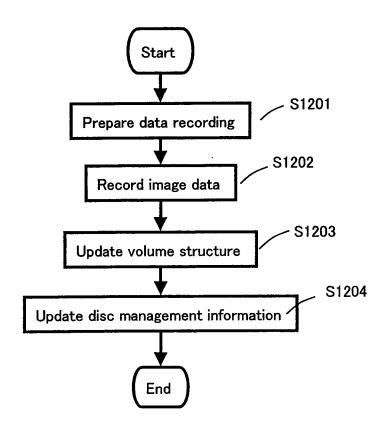
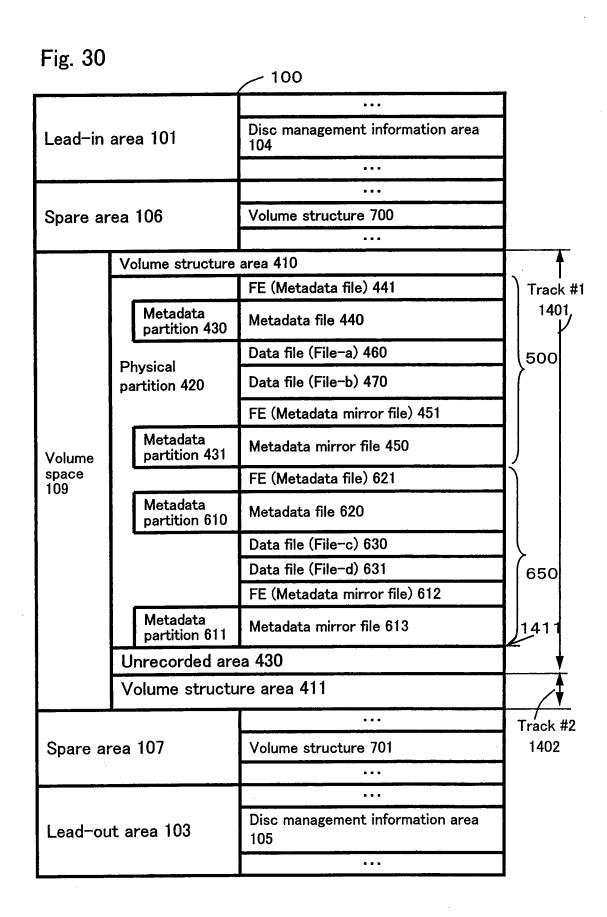
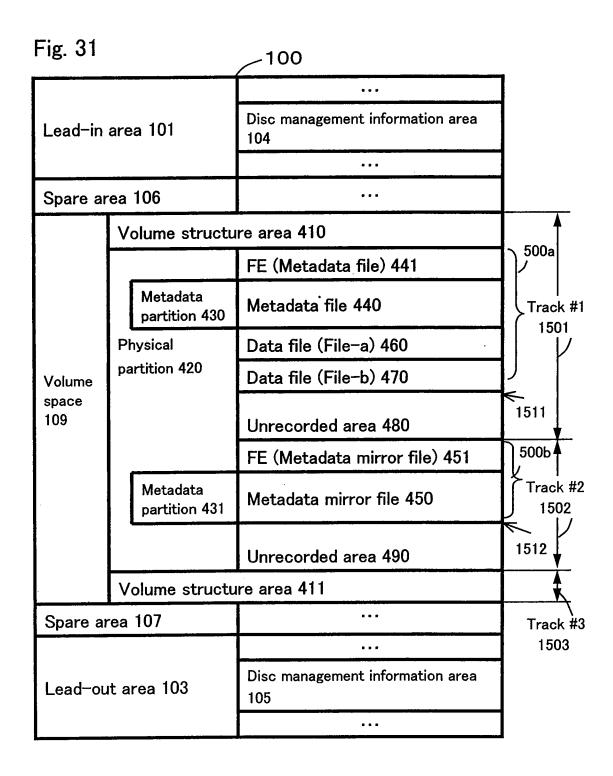


Fig. 29







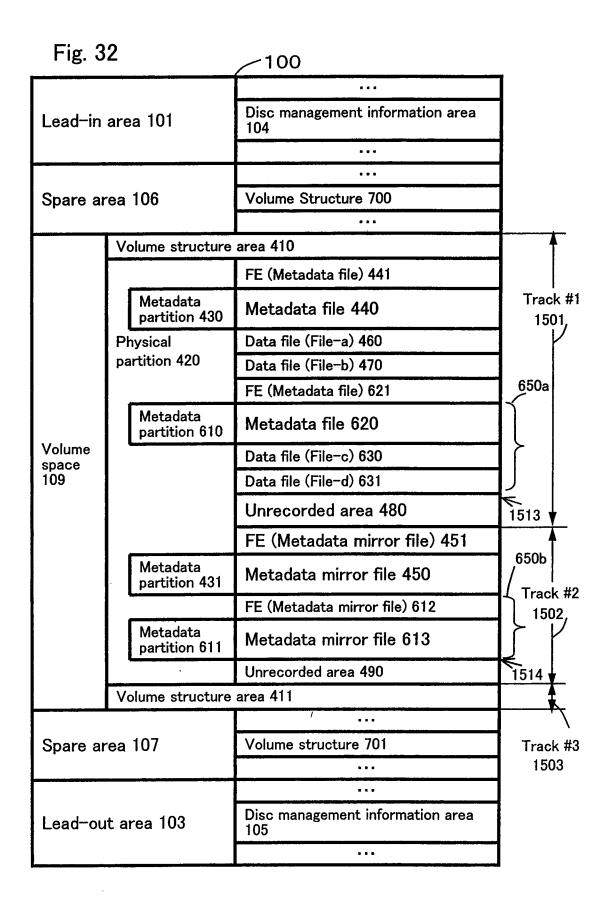


Fig. 33

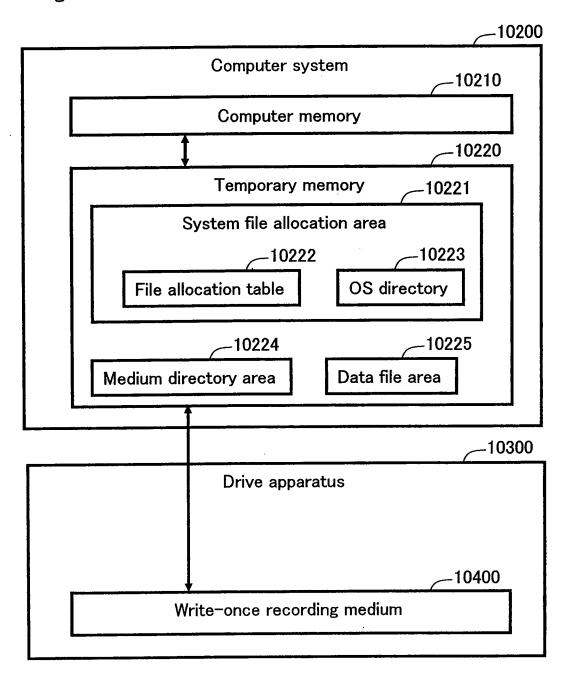


Fig. 34

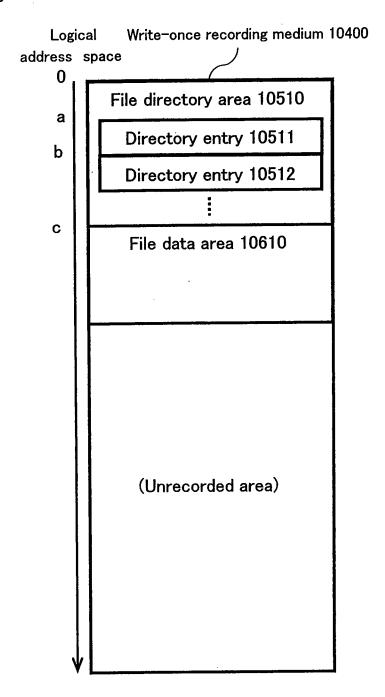


Fig. 35

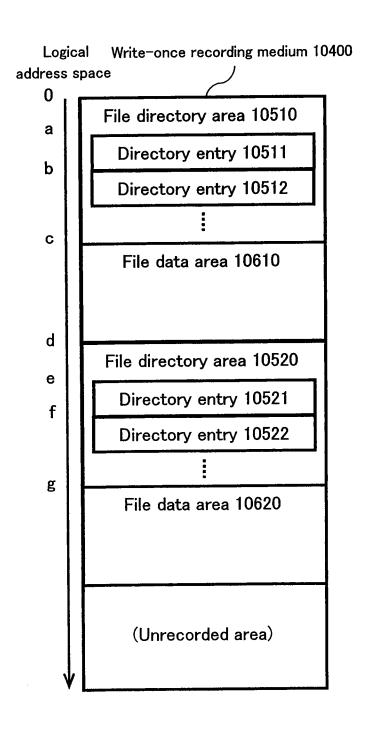
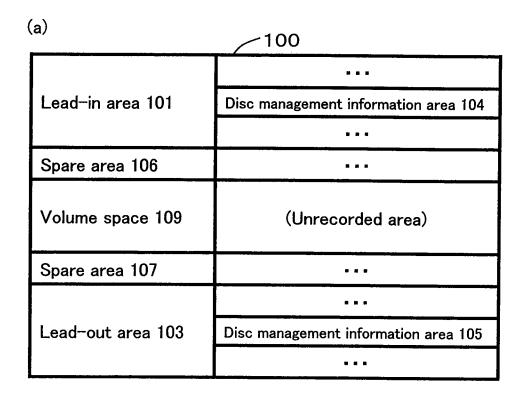


Fig. 36



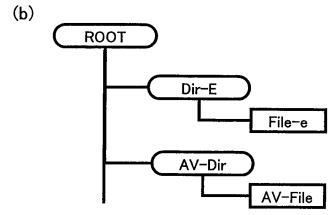


Fig. 37

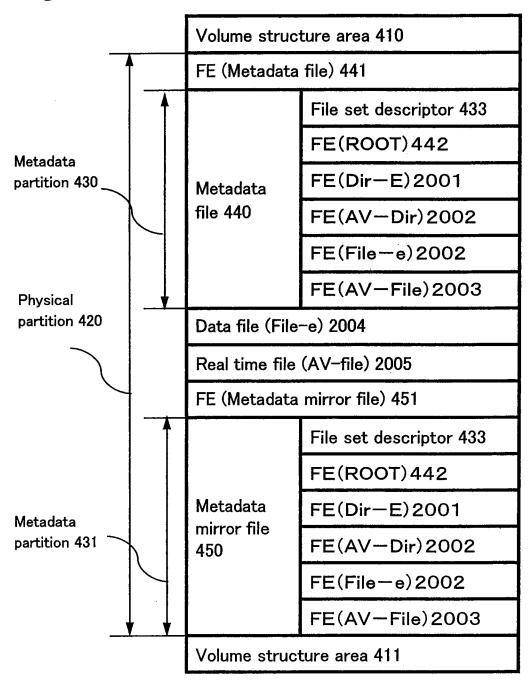


FIG.38

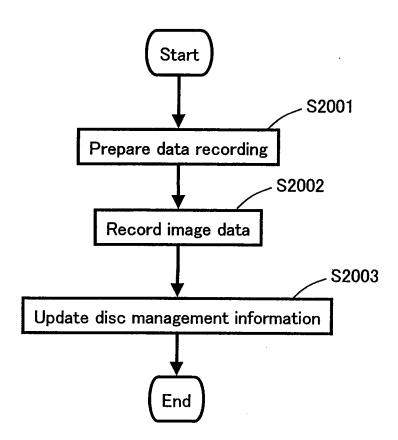
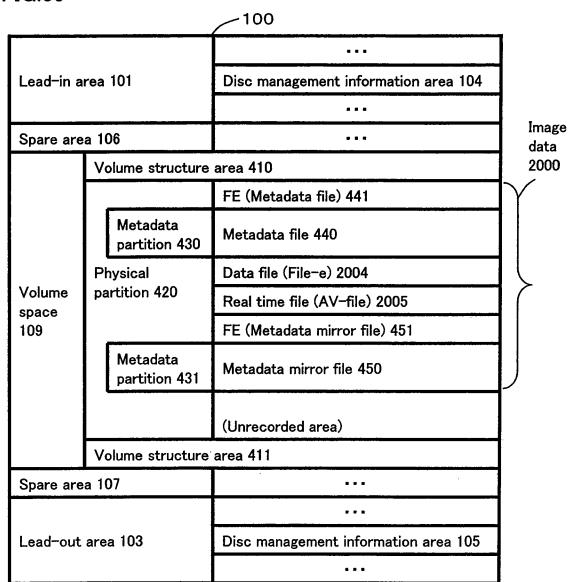


FIG.39



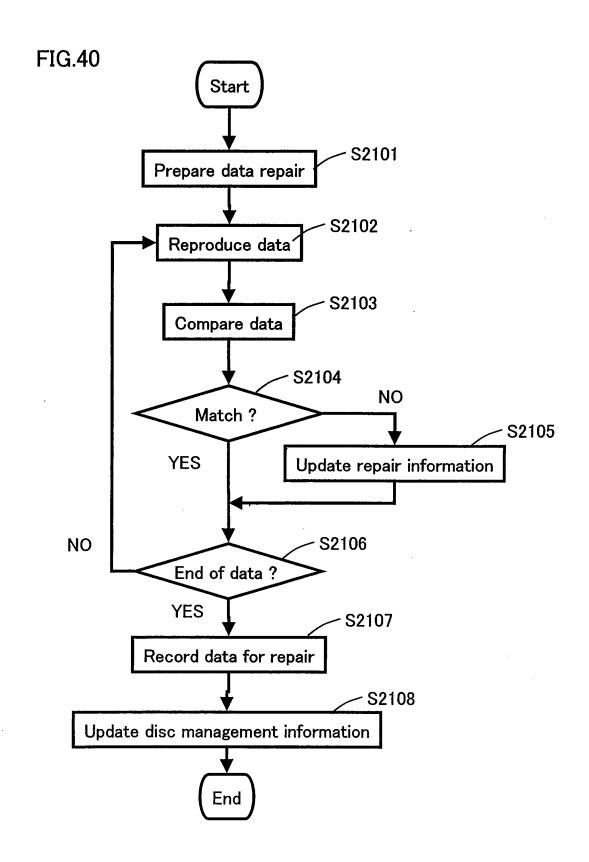


FIG.41

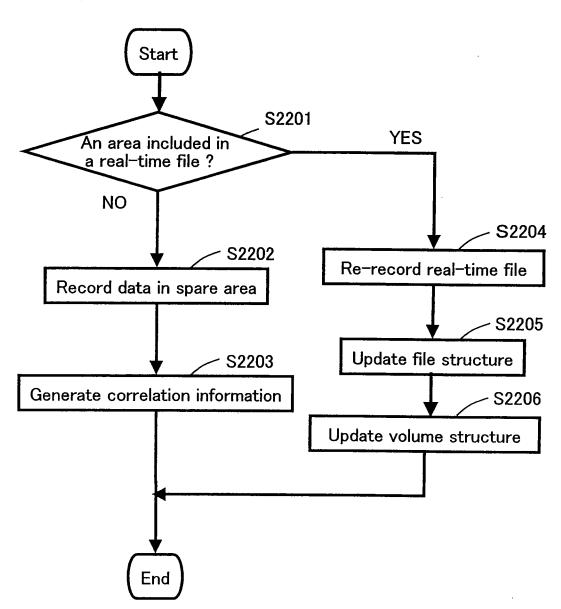


FIG.42

-100 Disc management information area Lead-in area 101 Repair data 2201 Spare area 106 Volume structure 2302 Volume structure area 410 FEFE (Metadata file) 441 430 Metadata file 440 Data file (File-e) 2004 **Physical** partition 420 Error area 2101 Extent #1 Extent #2 2005 Error area 2102 Volume space 109 Extent #3 FE (Metadata mirror file) 451 Metadata mirror file 450 431 2005 Extent #2a FE (Metadata file) 2301 430a Metadata file 2300 (Unrecorded area) Volume structure area 411 Spare area 107 Volume structure 2303 Disc management information area Lead-out area 103 105

FIG.43

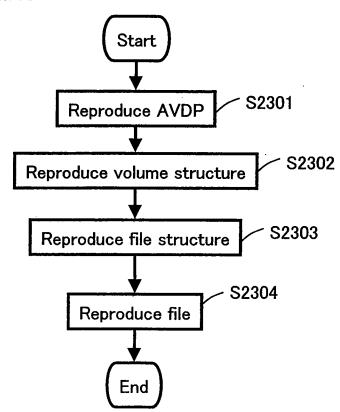
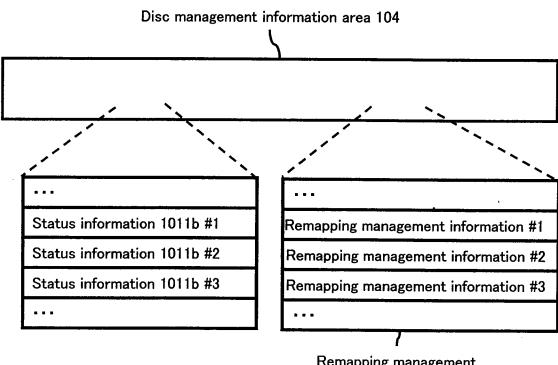


FIG.44



Remapping management information list 3000

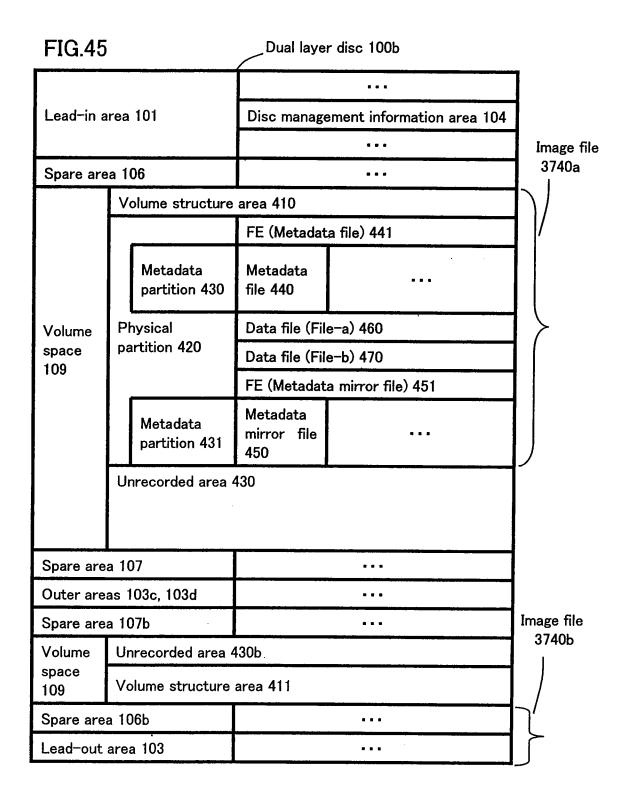


FIG.46		Dual layer disc 100b	
Lead-in area 101]
		Disc management information area 104	
		•••	1
Spare area 106		•••	1
		AVDP 3800a	1
		AVDP 3800b	1
		AVDP 3800c	1
		• • •	1
Volume space 109	Volume structure	e area 410	
		FE (Metadata file) 441	
	430	Metadata file 440	1
	Physical	Data file (File−a) 460	Image file
	partition 420	Data file (File-b) 470	3750a
		FE (Metadata mirror file) 451	
	431	Metadata mirror file 450	h /
	Volume structure area 710		1 '
		FE (Metadata file) 621] [
	610	Metadata file 620	1 >
		Data file (File-c) 630	
		Data file (File-d) 631	
		FE (Metadata mirror file) 612	IJ
	611	Metadata mirror file 613	
	•••		
Spare area 107		• • •	Image file
Outer areas 103c, 103d			3750b
Spare area 107b			
Volume space 109			h /
	Volume structure area 711		_
	Volume structure area 411		
Spare area 106b		•••	
Lead-out area 103b			

FIG.47

Original location information 1012	Replacement location information 1013	
Location information of AVDP 3600a	Location information of AVDP 3800a	
Location information of AVDP 3600b	Location information of AVDP 3800b	
Location information of AVDP 3600c	Location information of AVDP 3800c	